

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019315**Date Inspected:** 06-Jan-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC) Chanxing Island**Location:** Shanghai, China

<b>CWI Name:</b>	Mr. Geng Wei		
<b>Inspected CWI report:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A

<b>CWI Present:</b>	Yes	No
<b>Rod Oven in Use:</b>	Yes	No N/A
<b>Weld Procedures Followed:</b>	Yes	No N/A
<b>Verified Joint Fit-up:</b>	Yes	No N/A
<b>Approved WPS:</b>	Yes	No N/A
<b>Delayed / Cancelled:</b>	Yes	No N/A

**Bridge No:** 34-0006**Component:** OBG Segment**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA), Vibin Kumar Selvanayaham, was present during the times noted above for observations relative to the work being performed.

Ultrasonic Testing (UT) – NWIT Document No: 008065

This QA inspector performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report for this date. The members are identified as OBG Segment. The weld designations reviewed are as follows:

1. SEG3007AV-099
2. SEG3007D-199
3. SEG3007E-200

SEG3007AU-079- ZPMC QC cancelled QA UT verification of this weld, because of ZMPC not yet completed UT repair welding of this weld joint.

Ultrasonic Testing (UT) – NWIT Document No: 008062

This QA inspector performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report for this date. The members are identified as OBG Segment. The weld designations reviewed are as follows:

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1. SEG3019AB – 123 - ZPMC QC cancelled the QA UT verification, because of ZPMC performing over length repair welding on Scanning face C Side of this weld.
2. SEG3019W-041 - ZPMC QC cancelled the QA UT verification, because of ZPMC not yet completed repair welding on this weld.

Visual Testing (VT) – NWIT Document No: 008059

This QA inspector randomly performed VT of the area previously tested and accepted by ZPMC Quality Control personnel. The members are identified as OBG Bike Path BK004A-064. The weld designations reviewed on before fit-up the closure plate welds. See the attached picture.

Bay 14

This QA Inspector observed the following work in progress:

Flux Core Arc Welding (FCAW) welding of weld joint SEG3020D-063 located on Floor Beam to Longitudinal Diaphragm of the OBG Segment 14W. ZPMC Welder is identified as 066239. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2231-ESAB.

Shielded Metal Arc Welding (SMAW) repair welding of weld joint SEG3020Q-058 located on Longitudinal Diaphragm to Floor Beam corner joint of OBG Segment 14W. ZPMC Welder is identified as 066038. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-3G (3F) – FCM – Repair, which is used as per Critical Welding Repair (CWR) B-CWR-2622.

SMAW repair welding of weld joint SEG3020R-033 located on Longitudinal Diaphragm to Floor Beam corner joint of OBG Segment 14W. ZPMC Welder is identified as 051348. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-3G (3F) – FCM – Repair, which is used as per Critical Welding Repair (CWR) B-CWR-2621.

FCAW welding of weld joint SEG3020D-063 located on Floor Beam to Longitudinal Diaphragm of the OBG Segment 14W. ZPMC Welder is identified as 066239. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-T-2131-ESAB.

FCAW welding of weld joint SEG3020BB-037 located on Sub Assembly to Bottom Plate of the OBG Segment 14W. ZPMC Welder is identified as 068445. ZPMC Quality Control (QC) is identified as Mr. Wang Xiang Pin. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-T-2232-ESAB.

FCAW welding of weld joint SEG3020BB-055 located on Sub Assembly to Bottom Plate of the OBG Segment 14W. ZPMC Welder is identified as 066695. ZPMC Quality Control (QC) is identified as Mr. Wang Xiang Pin. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-T-2232-ESAB.

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FCAW welding of weld joint SEG3020BB-001 located on Sub Assembly to Bottom Plate of the OBG Segment 14W. ZPMC Welder is identified as 068445. ZPMC Quality Control (QC) is identified as Mr. Wang Xiang Pin. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-T-2232-ESAB.

FCAW welding of weld joint SEG3020Y-079, 080 located on Longitudinal Diaphragm to Floor Beam of the OBG Segment 14W. ZPMC Welder is identified as 047866. ZPMC Quality Control (QC) is identified as Mr. Wang Xiang Pin. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-T-2233-ESAB.

Bay 08

This QA Inspector observed the following work in progress:

Flux Core Arc Welding (FCAW) welding of weld joint BK004A6-059-072 and 073 located on end plate to bottom plate Longitudinal Diaphragm of the OBG bike path BK004A-059. ZPMC Welder is identified as 500405. ZPMC Quality Control (QC) is identified as Mr. Liu Chuan Gang. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-T-2132-ESAB.

FCAW welding of weld joint BK004A8-059-072 and 073 located on end plate to bottom plate Longitudinal Diaphragm of the OBG bike path BK004A-059. ZPMC Welder is identified as 054459. ZPMC Quality Control (QC) is identified as Mr. Liu Chuan Gang. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-T-2132-ESAB.

Shielded Metal Arc Welding (SMAW) welding of weld joint BK004A3-059-002, 003, 007 and 010 located on end plate to side plate of the OBG bike path BK004A-059. ZPMC Welder is identified as 069894. ZPMC Quality Control (QC) is identified as Mr. Liu Chuan Gang. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-P-2212-Tc-U4c.

SMAW welding of weld joint BK004A5-059-002, 003, 006 and 008 located on end plate to side plate of the OBG bike path BK004A-059. ZPMC Welder is identified as 037840. ZPMC Quality Control (QC) is identified as Mr. Liu Chuan Gang. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-P-2212-Tc-U4c.

Description of Incident: During Quality Assurance Visual Inspection (VT) verification of the OBG Bike path (BK)-BK4A-064, this Caltrans Quality Assurance (QA) inspector observed that the gap between bearing plate (BKPL7A) to the end stiffener plate (BKX11D) within the maximum tolerance specified in AWS D1.5. The approved shop drawing identified as BK4E, Section N-N, specifies that this joint is tight fit and no weld. The gap between bearing plate to the end stiffener plate, as measured by this QA, is approximately 2mm. The bearing plate and to the end stiffener plates are identified as BKPL7A and BKX11D respectively. VT inspection has been carried out prior to installation of the BK end closure plates BKPL8. OBG BK4A-064 is currently located in the Subassembly bay-8. The Notice of Witness Inspection Number (NWIT) is 08076. See the attaché pictures.

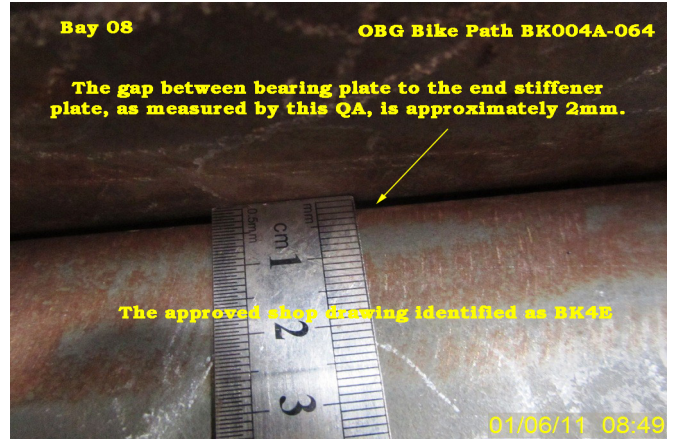
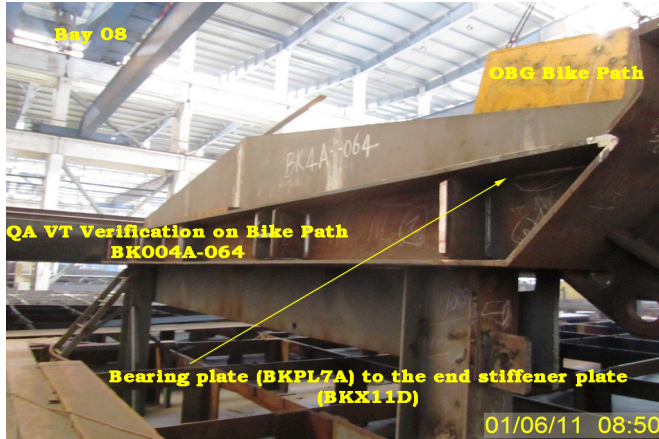
Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

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## Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

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**Inspected By:** Kumar,Vibin

Quality Assurance Inspector

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**Reviewed By:** Patel,Hiranch

QA Reviewer